

### Abstract of the Disclosure

A method and apparatus for fast inverse discrete cosine transform (IDCT) are provided. The fast IDCT method includes: (a) searching all elements of a discrete cosine transform (DCT) matrix in a predetermined order for non-zero elements; and (b) calculating the restored value of each element of a restoration matrix, by 2 dimensional-inverse DCT (2D-IDCT) transforming the non-zero elements of the DCT matrix by using the symmetry of an IDCT formula. According to the method and apparatus, unnecessary computation for 0's that are the majority of elements in a DCT matrix can be reduced to the minimum in performing the IDCT transform. In addition, even when the number of elements having effective values is large in a DCT matrix, the amount of computation is greatly reduced by using the symmetry of a DCT formula such that the method shows an excellent performance when statistically compared to the conventional fast DCT algorithms.